

# Work Order ID 76478

Wednesday, November 23, 2011 1:37:59 PM

## \*76478\*

Page 1

Item ID: D119-696-011

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Single Cargo Mirror Installation

Start Date: 11/15/2011 Start Qty: 2.00 \*2\*

Cust Item ID:

Required Date: 11/25/2011 Req'd Qty: 2.00 \*2\*

Customer:

Reference: ECN 11-648 - *REWORK*

Approvals: Process Plan: *mf*

Date: *11-11-23* Tooling:

Date:

Run Start \*NR1\*

QC:

Date: SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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DSI9578	A
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IIN-D119-696	A
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150		0.00
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\*150\*

Packaging

Memo

0.00

Packaging

PULL FROM STOCK D119-696-011 X 2  
B 65736

160		0.00
-----	--	------

\*160\*

Small Fab

Memo

0.00

Small Fab

DISASSEMBLE KIT  
REMOVE AND DISCARD D3074-1(ARM) D2057 PLUG

REMOVE AND PUT ASIDE:  
D2011-101 X 1 AND SCRAP HARDWARE

INSTALL D4450-1 ARM AND REPLACEMENT D2057 AS PER DRAWING  
INSTALL D2011-101 MIRROR TO D4450-1 ARM USING NEW HARDWARE

*GP 11/12/06 (2)*

*GP 11/12/06 (2)*

<b>DART</b> Dart Aerospace Ltd. 1270 ABERDEEN ST. HAWKESBURY, ONT CANADA K6A 1K7				QC APPROVAL # 09-89 TEL: 1-613-632-5200	
P/N	D119-696-011	QRC	CHG005		
DESC	Single Cargo Mirror	STC	SR01043SE		
LOT	B65736	STC			
MODEL	Agusta AH19/AWH19 MKII	STC			
MADE IN CANADA					

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**\*76478\***

Page 2

Item ID: D119-696-011

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Single Cargo Mirror Installation

Stop **\*NS2\***Start Date: 11/15/2011 Start Qty: 2.00 **\*2\***

Cust Item ID:

Required Date: 11/25/2011 Req'd Qty: 2.00 **\*2\***

Customer:

Reference: ECN 11-648

Approvals: Process Plan: Date:

Run Start **\*NR1\***

QC: Date:

Tooling: Date:

Stop **\*NR2\***

SPC (Y/N): Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

170

QC5- Inspect part completeness to step on W/O

0.00

**\*170\***

QC

Memo

0.00

Quality Control

180

Identify as per dwg & Stock Location: <sup>P6</sup> 041 0.00**\*180\***

Packaging

Memo

0.00

Packaging

ID AND STOCK UNDER NEW BATCH NUMBER

DISCARD OLD PAPERWORK AND ADD NEW PAPERWORK

190

QC4- 100% Inspect kits for completeness 0.00

**\*190\***

QC

Memo

0.00

Quality Control

<b>DART</b> Dart Aerospace Ltd. 1270 ABERDEEN ST. HAWKESBURY ONT CANADA K6A 1K7		TC APPROVAL # 09-89 TEL: 1-613-632-5200	
P/N	D119-696-011	CIC	CHG005
DESC	Single Cargo Mirror	SIC	SR01043SE
LOT	B65736	SIC	
MODEL	Agusta A119/AW119 MKII	SIC	
MADE IN CANADA		02729-1	

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**\*76478\***

Page 3

Item ID: D119-696-011

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Single Cargo Mirror Installation

Start Date: 11/15/2011 Start Qty: 2.00 **\*2\***

Cust Item ID:

Required Date: 11/25/2011 Req'd Qty: 2.00 **\*2\***

Customer:

Reference: ECN 11-648

Approvals: Process Plan: Date: Tooling: Date:

Run Start **\*NR1\***

QC: Date: SPC (Y/N): Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

QC21- Final Inspection - Work Order Release

0.00


**\*200\***

QC

Memo

0.00

Quality Control

11/12/13   
MK  
11-12-09

# Picklist Print

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Page 1

Work Order ID: 76478

Parent Item: D119-696-011

Parent Item Name: Single Cargo Mirror Installation

Start Date: 11/15/2011

Required Date: 11/25/2011

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A new issue DD 10.04.15 verified by:EC IPP REV:B 11.01.19 AS PER  
CHG005 DD VERF:EC IPP REV:C 11.11.14 AS PER CHG006 DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN960JD10 Washer	NAS1149D0363J	Purchased	No				Each	0.0000		12		11/12/06	
AN960JD416L Washer	NAS1149D0416J	Purchased	No				Each	11.0000		2		11/12/06	

Location

Loc Qty

Loc Code

FP

11

110153

11

D2057

Manufactured

No

Each

42.0000

2

Location

Loc Qty

Loc Code

GA

40

71888

20

75070

20

ST005

2

71103

2

D3014-1

Manufactured

No

Each

64.0000

2

Locknut

Location

Loc Qty

Loc Code

ST030

64

18605

64

D4450-1

Manufactured

No

Each

0.0000

2

Arm

B 76883 (2)

# Picklist Print

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Page 2

Work Order ID: 76478

Parent Item: D119-696-011

Parent Item Name: Single Cargo Mirror Installation

Start Date: 11/15/2011

Required Date: 11/25/2011

Start Qty: 2.00

Required Qty: 2.00

MS21042L3 Purchased No Each 8,188.0000

Nut

Location Loc Qty Loc Code

ST300	213	
117441	16	
117885	35	
118451	5	
118927	157	
ST516	5994	
119017	5994	
ST518	1981	
119075	1981	

MS27039-1-18

Purchased No

Each 66.0000

Screw

Location Loc Qty Loc Code

ST291	66	
115589	66	

6 *EP 11/12/06*

6 *EP 11/12/06*

# DART SERVICE INSTRUCTION

## **TO AMEND INSTALLATION INSTRUCTIONS IIN-D119-696 REV. A AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D119-696 REV. 0**

REF FAA STC: SR01043SE

REF TC LETTERS OF ACCEPTANCE: C-11-0119/-0120/-0121

REF EASA STC: EASA.IM.R.S.01551

### PURPOSE

This service instruction details the D119-696-011/-013 Cargo Mirror Installations at CHG 006 which have been improved with D4450-1/-043 Arm/Arm Assembly. The D4450-1/-043 replaces D3074-1/-3 and feature a more robust and ergonomic design. Customers/operators who wish to upgrade existing D119-696-011/-013 Cargo Mirror Installations at earlier change numbers may procure the DSI-9578-011/-013 Kit from Dart. The revised weight and balance and parts list on page 2 of this service instruction are to be used for D119-696-011/-013 Cargo Mirror Installations at CHG 006.

### INSTALLATION

#### **Replacement of D3074-1 arm on D119-696-011 Single Mirror Installation:**

1. Remove and discard existing D3074-1 Arm and existing D2057 Plug.
2. Install D4450-1 Arm and replacement D2057 Plug in accordance with Figure 1 of this service instruction.
3. Install D2011-101 Mirror to D4450-1 Arm using D3014-1 Locknut as shown in Figure 1 of this service instruction.

#### **Replacement of D3074-3 Arm on D119-696-013 Dual Mirror Installation:**

1. Remove and discard the existing D3074-3 Arm and associated parts/hardware. Note that the D3074-3 Arm also includes 2 X D2052 Brackets, 2 X D2055 Clamps, a D2056 Bellcrank, 2 X D2054 Bushings, and attaching hardware.
2. Install D4450-043 Arm Assembly in accordance with Figure 1 of this service instruction.
3. Install 2 X D2011-101 Mirrors to D4450-043 Arm Assembly using D3014-1 Locknuts as shown in Figure 1 of this service instruction.

### MAINTENANCE AND CONTINUED AIRWORTHINESS

Inspection requirements for D4450-1/-043 Arm are identical to D3074-1/-3 Arm they are replacing. Refer to ICA-D119-696.

### WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D119-696-011	2.3 lb	7.0 in	16.1 in-lb	22.0 in	50.6 in-lb
Cargo Mirror Installation (CHG 006)	1.04 kg	0.18 m	0.19 m-kg	0.56 m	0.58 m-kg
D119-696-013	3.2 lb	1.0 in	3.2 in-lb	22.0 in	70.4 in-lb
Cargo Mirror Installation (CHG 006)	1.45 kg	0.03 m	0.04 m-kg	0.56 m	0.81 m-kg

A	NEW ISSUE	MB	11.10.04
REV.		DESCRIPTION	BY DATE
DESIGN		<b>DART AEROSPACE USA, INC</b>	
DRAWN		KENT, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		DSI 9578	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		MIRROR ARM UPGRADE	NTS
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# PARTS LIST

Qty -011	Qty -013	Qty -041	Qty -043	Part Number	Description
X				D119-696-011	SINGLE CARGO MIRROR INSTALLATION
	X			D119-696-013	DUAL CARGO MIRROR INSTALLATION
1		X		D119-696-041	SINGLE CARGO MIRROR ASSEMBLY
	1		X	D119-696-043	DUAL CARGO MIRROR ASSEMBLY
		1	2	D2011-101	MIRROR ASSEMBLY
1	1			D2053	BRACKET
		2	**2	D2054	BUSHING
		2	**2	D2055	CLAMP
		1	**1	D2056	BELL CRANK
		1		D2057	PLUG
1	1			D2067	CONNECTOR
1	1			D2071	CABLE ASSEMBLY
		*1	*2	D3014-1	LOCKNUT
		1	**1	D3072-1	BRACKET
		1	**1	D3072-2	BRACKET
1	1			D3083-1	PLACARD
		1		D4450-1	ARM (WAS D3074-1)
			1	D4450-043	ARM ASSEMBLY (WAS D3074-3)
4	4			AN526-1032R9	SCREW
4	4	6	**6	AN960JD10	WASHER
		*1	*2	AN960JD416L	WASHER
		3	**3	MS21042L3	NUT (or MS21042-3)
2	2			MS21919DG5	CLAMP
4	4			MS27039-1-09	SCREW
		3	**3	MS27039-1-18	SCREW
1	1			MS35489-9	GROMMET
2	2			AKS7-1032-130	INSERT (or ALS7-1032-130 or AKS4-1032-130 or ALS7-1032-130 or AELS-032-130)

\* INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

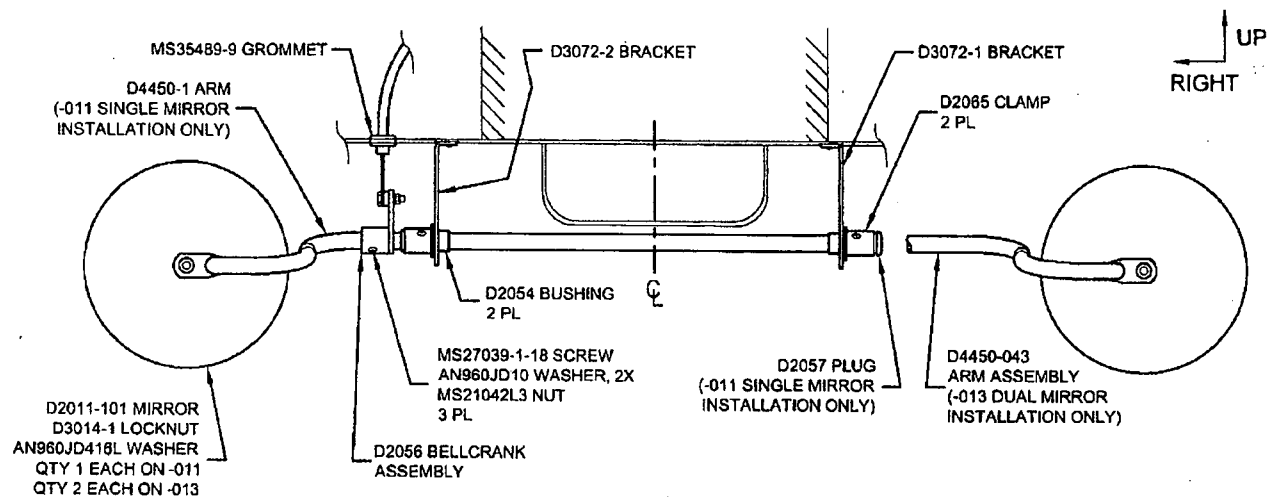
\*\* INCLUDED WITH D4450-043 ARM

Qty -011	Qty -013	Part Number	Description
X		DSI-9578-011	MIRROR ARM UPGRADE KIT (SINGLE CARGO MIRROR INSTALLATION)
	X	DSI-9578-013	MIRROR ARM UPGRADE KIT (DUAL CARGO MIRROR INSTALLATION)
	**2	D2054	BUSHING
	**2	D2055	CLAMP
	**1	D2056	BELL CRANK
1		D2057	PLUG
	**1	D3072-1	BRACKET
	**1	D3072-2	BRACKET
1		D4450-1	ARM
	1	D4450-043	ARM ASSEMBLY
	**6	AN960JD10	WASHER
	**3	MS21042L3	NUT (or MS21042-3)
	**3	MS27039-1-18	SCREW

\*\* INCLUDED WITH D4450-043 ARM

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3210478



**FIGURE 1**

D119-696-011/-013 SINGLE/DUAL MIRROR INSTALLATION

#76478

DESIGN		<b>DART AEROSPACE USA, INC</b>
DRAWN		KENT, WA
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